

1

1
-253

2.2
-259

1+
0.0899

H

hydrogen

1.01

2

3
1342

1.0
181

1+
0.534

Li

lithium

6.94

4
2467

1.6
1287

2+
1.85

Be

beryllium

9.01

11
883

0.9
97.8

1+
0.971

Na

sodium

22.99

12
1090

1.3
650

2+
1.74

Mg

magnesium

24.31

3

3
IIIB

4
IVB

5
VB

6
VIB

7
VIIB

4

19
759

0.8
64

1+
0.862

K

potassium

39.10

20
1484

1.0
842

2+
1.54

Ca

calcium

40.08

21
2836

1.4
1541

3+
2.99

Sc

scandium

44.96

22
3287

1.5
1668

4+
4.54

3+

Ti

titanium

47.87

23
3407

1.6
1910

5+
5.96

4+

V

vanadium

50.94

24
2671

1.7
1907

3+
7.20

2+

Cr

chromium

52.00

25
2061

1.6
1246

2+
7.20

4+

Mn

manganese

54.94

26
2861

1.8
1538

3+
7.87

2+

Fe

iron

55.85

27
2927

1.9
1495

2+
8.9

3+

Co

cobalt

58.93

37
686

0.8
38.9

1+
1.53

Rb

rubidium

85.47

38
1382

1.0
777

2+
2.6

Sr

strontium

87.62

	58 1.1 3+	3443 798 6.69	59 1.1 3+	3520 931 6.64	60 1.1 3+	3074 1021 7.01	61 — 3+	3000 1042 7.26	62 1.2 3+ 2+	1794 1074 7.52
	Ce cerium 140.12		Pr praseodymium 140.91		Nd neodymium 144.24		Pm promethium (145)		Sm samarium 150.36	
7	90 1.3 4+	4788 1750 11.7	91 1.5 5+ 4+	— 1572 15.4	92 1.7 6+ 4+	4131 1135 19.1	93 1.3 5+	4000 644 20.5	94 1.3 4+ 6+	3228 640 19.8
	Th thorium 232.04		Pa protactinium 231.04		U uranium 238.03		Np neptunium (237)		Pu plutonium (244)	

Periodic Table of the Elements

Measured values are subject to change as experimental techniques improve. Atomic molar mass values in this table are based on IUPAC Web site values (2005). Some melting points can only be measured at higher than standard pressures.

										18 VIIIA
										2 — — He helium 4.00
										8 — — Ne neon 20.18
										18 — — Ar argon 39.95
										36 — — Kr krypton 83.80
										54 — — Xe xenon 131.29
										86 — — Rn radon (222)
10	11 IB	12 IIB	13 IIIA	14 IVA	15 VA	16 VIA	17 VIIA			
28 1.9 2+ 3+ Ni nickel 58.69	29 1.9 2+ 1+ Cu copper 63.55	30 1.7 2+ 2+ Zn zinc 65.41	31 1.8 3+ 3+ Ga gallium 69.72	32 2.0 4+ 4+ Ge germanium 72.64	33 2.2 3+ 3+ As arsenic 74.92	34 2.6 2+ 2+ Se selenium 78.96	35 3.0 1+ 1+ Br bromine 79.90	36 3.0 — — Kr krypton 83.80		
46 2.2 2+ 4+ Pd palladium 106.42	47 1.9 1+ 1+ Ag silver 107.87	48 1.7 2+ 2+ Cd cadmium 112.41	49 1.8 3+ 3+ In indium 114.82	50 2.0 4+ 2+ Sn tin 118.71	51 2.1 3+ 5+ Sb antimony 121.76	52 2.1 2+ 2+ Te tellurium 127.60	53 2.7 1+ 1+ I iodine 126.90	54 2.6 — — Xe xenon 131.29		
78 2.2 4+ 2+ Pt platinum 195.08	79 2.4 3+ 1+ Au gold 196.97	80 1.9 2+ 1+ Hg mercury 200.59	81 1.8 1+ 3+ Tl thallium 204.38	82 1.8 2+ 4+ Pb lead 207.2	83 1.9 3+ 5+ Bi bismuth 208.98	84 2.0 4+ 4+ Po polonium (209)	85 2.2 1+ 1+ At astatine (210)	86 — — — Rn radon (222)		
110 Ds darmstadtium (281)	111 Rg roentgenium (272)	112 Uub ununbium	113 Uut ununtrium	114 Uuq ununquadium	115 Uup ununpentium	116 Uuh ununhexium	117 Uus ununseptium	118 Uuo ununoctium		
63 — 3+ 2+ Eu europium 151.96	64 1.2 3+ 3+ Gd gadolinium 157.25	65 — 3+ 3+ Tb terbium 158.93	66 1.2 3+ 3+ Dy dysprosium 162.50	67 1.2 3+ 3+ Ho holmium 164.93	68 1.2 3+ 3+ Er erbium 167.26	69 1.3 3+ 3+ Tm thulium 168.93	70 — 3+ 2+ Yb ytterbium 173.04	71 1.3 2+ 2+ Lu lutetium 174.97		
95 — 3+ 4+ Am americium (243)	96 1.3 3+ 3+ Cm curium (247)	97 1.3 3+ 4+ Bk berkelium (247)	98 1.3 3+ 3+ Cf californium (251)	99 1.3 3+ 3+ Es einsteinium (252)	100 1.3 3+ 3+ Fm fermium (257)	101 — 2+ 3+ Md mendelevium (258)	102 — 2+ 3+ No nobelium (259)	103 — 3+ 3+ Lr lawrencium (262)		